

# INTERNATIONAL SEARCH REPORT

International application No  
PCT/JP2005/018731

<b>A CLASSIFICATION OF SUBJECT MATTER</b>														
Int Cl <sup>7</sup> <b>H01L21/301</b> (2006 01), <b>H01L33/00</b> (2006 01), <b>H01L21/02</b> (2006 01)														
According to International Patent Classification (PC) or to both national classification and P C														
<b>B FIELDS SEARCHED</b>														
Minimum documentation searched (classification system followed by classification symbols) Int Cl <sup>1</sup> <b>H01L21/301</b> (2006 01), <b>H01L33/00</b> (2006 01), <b>H01L21/02</b> (2006 01)														
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Published examined utility model applications of Japan 1922 1996 Published unexamined utility model applications of Japan 1971 2005 Registered utility model specifications of Japan 1996 2005 Published registered utility model applications of Japan 1994-2005														
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)														
<b>C DOCUMENTS CONSIDERED TO BE RELEVANT</b>														
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No												
Y	JP 2004-31526 A (TOYODA GOSEI K.K.) 2004.01.29, [ 0013] - [ 0015] , [ 0020] , [ 0021] , Fig. 1 and 4 & EP 1376687 A2 & CN 1484328 A	1-4, 6-10, 13-16, 19-24												
A		5, 11, 12, 17, 18												
Y	JP 2001-77056 A (SEIKO EPSON K.K.) 2001.03.23, [ 0029] , [ 0030] (Family:none)	1-4 , 6-10, 13-15 , 20-24												
Y	JP 1-214010 A (SUMITOMO DENKI KOGYOU K.K.) 1989.08.28, Claims (Family:none)	1-4 , 6-10 , 13-16, 19-24												
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C in See patent family annex														
<table border="0"> <tr> <td>* Special categories of cited documents</td> <td>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>"E" earlier application or patent but published on or after the international filing date</td> <td>"Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>"&amp;" document member of the same patent family</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td></td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </table>			* Special categories of cited documents	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family	"O" document referring to an oral disclosure, use, exhibition or other means		"P" document published prior to the international filing date but later than the priority date claimed	
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 9-82587 A ( HEWLETT-PACKARD Company ) 1997.03.28, [0008] (Family :none)	1-4, 6-10, 13-15, 20-24
Y	JP 2002-359402 A (LUMILEDS LIGHTING U.S., LLC) 2002.12.13, [0004] & US 2002/139987 A1 & DE 10213464 A & TW 540169 A	1-4, 6-10, 13-16, 19-24
Y	JP 56-129340 A (TOKYO SHIBAURA DENKI K.K.) 1981.10.09, Fig. 3 (Family :none)	9
Y	JP 2003-151921 A (SANYO DENKI K.K.) 2003.05.23, [0022] - [0025] , Fig. 2 (Family :none)	10
Y	JP 3-209744 A (K.K. TOSHIBA) 1991.09.12, Fig. 1 (Family: none)	14
Y	Microfilm of the specification and drawings annexed to the written application of Japanese Utility Model Application No.39683/1987 (Laid-open No. 145608/1988) ( MITSUBISHI DENKI K.K.), 1988.09.26, Fig. 3 (Family :none)	14
Y	JP 7-99345 A (NICHIA KAGAKU KOGYOU K.K.) 1995.04.11, [0013] , Fig. 4 (Family :none)	24